

ABSTRACT

A highly reliable reciprocating compressor works efficiently with less energy, and produces smaller vibrations. This reciprocating compressor includes a crankshaft, a block, a piston, a connecting rod, and a balancing weight. The cylinder is placed offset such that an axis line thereof and an axis line of the main shaft do not cross each other. The center of gravity of the balancing weight is placed substantially opposite to the center of the eccentric section with respect to the axis line of the main shaft and deviated along a rotating direction of the main shaft from the place just opposite to the center of the eccentric section. The foregoing construction allows reducing lateral pressure of the piston, thereby increasing the reliability and efficiency of the reciprocating compressor, and allows to cancel unbalancing force produced by motions of the piston, the connecting rod and the eccentric section with motion of the balancing weight.